Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-48 (canceled).

49. (currently amended) A method for analyzing a sample oligonucleotide sequence comprising:

(a) forming a plurality of individually electronically addressable microscopic locations on a substrate, ~~wherein~~ each microscopic location ~~is individually electronically addressable~~ comprising a micro-electrode;

(b) providing a permeation layer adjacent to said micro-electrode in each of said microscopic locations, said permeation layer having selective diffusion properties thereby permitting the free transport of counter-ions to said micro-electrode and inhibiting large binding entities from physical contact with said micro-electrode;

(c) providing an attachment layer adjacent to said permeation layer in each of said microscopic locations;

[[(b)]] (d) electronically immobilizing one or more anchor sequences to said attachment layer in individually selected microscopic locations, wherein said one or more anchor sequences comprise oligonucleotide sequences ~~which hybridize~~ capable of hybridizing with ~~the~~ said sample oligonucleotide sequence;

[[(c)]] (e) contacting [[the]] said sample oligonucleotide sequence with [[the]] said one or more anchor sequences thereby allowing said sample oligonucleotide sequence to hybridize to said one or more anchor sequences ~~and with a mobilized probe~~,

~~wherein the probe comprises an oligonucleotide sequence which hybridizes to a target oligonucleotide sequence to be detected in a suitable buffer, to form a complex;~~

[[(d)]] (f) subjecting said individually selected microlocations ~~complex~~ to [[a]] an electric field which moves ~~unbound~~ unhybridized sample oligonucleotide sequences away from said one or more anchor sequences ~~in the direction of said field, wherein said field is an electric field~~; and

[[(e)]] (g) determining whether said ~~probe is bound to said~~ sample oligonucleotide sequence is hybridized to said one or more anchor sequences.

Claims 50-56 (canceled).

57. (currently amended) The method of claim 49, wherein step (e) additionally ~~comprising~~ comprises subjecting ~~the probe~~ said individually selected microlocations to [[a]] an electric field which concentrates ~~the probe~~ said sample oligonucleotide sequence near [[the]] said one or more anchor sequences ~~during step (c)~~.

58. (currently amended) The method of claim 49, wherein each one of said [[probe]] one or more anchor sequences is from 6 to 100 bases.

Claims 59-78 (canceled).

79. (currently amended) The method of claim 49, wherein said [[probe]] sample oligonucleotide sequence is free to move and be transported between said microscopic locations on said

substrate.

80. (New) The method of claim 49, wherein step (g) further comprises:

(i) adding a probe comprising an oligonucleotide sequence capable of hybridizing to a target oligonucleotide sequence forming part of said sample oligonucleotide sequence that is not hybridized to said one or more anchor sequences, thereby allowing said probe to hybridize to said target oligonucleotide sequence;

(ii) subjecting said individually selected microscopic locations to an electric field which moves unhybridized probe oligonucleotide sequences away from said one or more anchor sequences; and

(iii) determining whether said probe is hybridized to said target oligonucleotide sequence.

81. (New) The method of claim 49, wherein said permeation layer, said attachment layer, or both, are made from aminopropyltriethoxy silane.